ELSEVIER

Coordination Chemistry Reviews 178–180,
Complete, December 1998

COORDINATION CHEMISTRY REVIEWS

Contents

Part 1

Foreword 1

Interview of Professor Gallais for the special edition of Coordination Chemistry Reviews. Inorganic Chemistry in France
P. Braunstein 3

Complexes containing bonds between group 3, lanthanide or actinide metals and non-first-row main group elements (excluding halogens)
F. Nief 13

New advances in the chemistry of uranium amide compounds
J.C. Berthet and M. Ephritikhine 83

Lanthanide iodides, a new family of efficient Lewis acid catalysts
J. Collin, N. Giuseppone and P. Van de Weghe 117

Zirconocene [Cp_2Zr] synthon and benzynezirconocene complexes as tools in main group element chemistry
J.-P. Majoral, P. Meunier, A. Igau, N. Pirio, M. Zablocka, A. Skowronska and S. Bredeau . . . 145

Comparative chemistry of 18-electron Mo(II) and 17-electron Mo(III) compounds containing only carbon-based ligands
R. Poli and L.-S. Wang 169

Molybdenum-oxo chemistry in various aspects of oxygen atom transfer processes
H. Arzoumanian 191

Dinuclear molybdenum thiolato-bridged compounds: syntheses, reactivities and electrochemical studies of site–substrate interactions
F.Y. Pétillon, P. Schollhammer, J. Talarmin and K.W. Muir 203

(η^6-Arene)tricarbonylchromium and (η^5-cyclohexadienyl) tricarbonylmanganese complexes: indirect nucleophilic substitutions
F. Rose-Munch, V. Gagliardini, C. Renard and E. Rose 249

Gas-phase reactivity of ionic iron complexes: comparison with solution chemistry
L. Capron, H. Mestdagh and C. Rolando 269

Coordination chemistry of mononuclear iron carbonyl complexes
J.-J. Brunet, R. Chauvin, O. Diallo, F. Kindela, P. Leglaye and D. Neibecker 331

Cis octahedral iron complexes $Fe[(CO)_xR][(CO)_yR']$$(CO)_4$ ($x+y=0, 1, 2, 3, 4$). Thermolysis and carbon–carbon coupling: a personal survey
J.-Y. Salaün, P. Laurent and H. des Abbayes 353

Chemistry of bis(dihydrogen) ruthenium complexes and of their derivatives
S. Sabo-Etienne and B. Chaudret 381

A new class of carbon-rich organometallics. The C_3, C_4 and C_5 metallacumulenes $Ru{=}(C{=})_nCR_2$
D. Touchard and P.H. Dixneuf 409

Organometallic molecular wires and other nanoscale-sized devices. An approach using the organoiron (dppe)CpFe building block
F. Paul and C. Lapinte 431

Role of dba in the reactivity of palladium(0) complexes generated in situ from mixtures of $Pd(dba)_2$ and phosphines
C. Amatore and A. Jutand 511

Aspects of anionic framework formation. Clustering of p-block elements
C. Belin and M. Tillard-Charbonnel 529

Silenes $>Si{=}C<$, germenes $>Ge{=}C<$ and stannenes $>Sn{=}C<$. The French contribution
J. Escudié, C. Couret and H. Ranaivonjatovo 565

Stable germanium analogs of carbenes, imines, ketones, thiones, selones and tellones
J. Barrau and G. Rima 593

Crystal and molecular structures of transition metal complexes with N- and C-bonded diazoalkane ligands
M. Dartiguenave, M.J. Menu, E. Deydier, Y. Dartiguenave and H. Siebald 623

Phosphane–boranes: synthesis, characterization and synthetic applications
J.M. Brunel, B. Faure and M. Maffei 665

Density functional theory. A powerful tool for theoretical studies in coordination chemistry
H. Chermette 699

Rare earth metal borocarbides. Examples of coordination compounds in solid-state chemistry
J. Bauer, J.-F. Halet and J.-Y. Saillard 723

Synthetic approaches to chiral phosphetanes
A. Marinetti, V. Kruger and F.-X. Buzin 755

Transition metals in phosphinine chemistry
P. Le Floch and F. Mathey 771

Phosphine-terminated dendrimers. Synthesis and complexation properties
A.-M. Caminade, R. Laurent, B. Chaudret and J.P. Majoral 793

Mixed cyclopentadienyl/dithiolene complexes
M. Fourmigué 823

Inorganic perchlorato complexes
J.-L. Pascal and F. Favier 865

Part 2

Bimetallic silicon chemistry. New opportunities in coordination and organometallic chemistry
P. Braunstein, M. Knorr, C. Stern 903

Some aspects of homo and heterometallic alkoxides based on functional alcohols
L.G. Hubert-Pfalzgraf 967

Synthesis of polyoxovanadates via "chimie douce"
J. Livage 999

From Lindqvist and Keggin ions to electronically inverse hosts: Ab initio modelling of the structure and reactivity of polyoxometalates
M.-M. Rohmer, M. Bénard, J.-P. Blaudeau, J.-M. Maestre, J.-M. Poblet 1019

Some recent developments of polysilsesquioxanes chemistry for material science
G. Cerveau, R.J.P. Corriu 1051

The design of selective catalysts from hybrid silica-based materials
J.J.E. Moreau, M.W.C. Man 1073

Transition-metal ligands bound onto the micelle-templated silica surface
D. Brunel, N. Bellocq, P. Sutra, A. Cauvel, M. Laspéras, P. Moreau, F. Di Renzo, A. Galarneau, F. Fajula 1085

Retrosynthesis in inorganic crystal structures: application to nesosilicate and inosilicate networks
M. Henry 1109

Decatungstate photocatalysis
C. Tanielian 1165

Enantioselective creation of helical chirality in octahedral (OC-6) complexes. Recent advances
J.-L. Pierre 1183

Cryptands revisited. Design, synthesis, complexation behaviour and structural analysis of borocryptands
E. Graf, M.W. Hosseini 1193

Electroactive polymers containing crown ether or polyether ligands as cation-responsive materials
B. Fabre, J. Simonet 1211

Multifunctional transition metal complexes. Information transfer at the molecular level
R. Ziessel, M. Hissler, A. El-ghayoury, A. Harriman 1251

Rotaxanes and other transition metal-assembled porphyrin arrays for long-range photoinduced charge separation
J.-C. Chambron, J.-P. Collin, J.-O. Dalbavie, C.O. Dietrich-Buchecker, V. Heitz, F. Odobel, N. Solladié, J.-P. Sauvage 1299

Conformations and coordination schemes of carboxylate and carbamoyl derivatives of the tetraazamacrocycles cyclen and cyclam, and the relation to their protonation states
M. Meyer, V. Dahaoui-Gindrey, C. Lecomte, R. Guilard 1313

Synthesis of biomimetic heme precursors
E. Rose, A. Lecas, M. Quelquejeu, A. Kossanyi, B. Boitrel 1407

Metallophthalocyanines. Gas sensors, resistors and field effect transistors
G. Guillaud, J. Simon, J.P. Germain 1433

My 20 years of research in the chemistry of metal containing liquid crystals
A.M. Giroud-Godquin 1485

Coordination complexes in conducting and magnetic molecular materials
L. Ouahab 1501

Molecular magnets. Hybrid organic–inorganic layered compounds with very long-range ferromagnetism
V. Laget, C. Hornick, P. Rabu, M. Drillon, R. Ziessel 1533

Functional models of non-heme diiron enzymes
M. Fontecave, S. Ménage, C. Duboc-Toia 1555

Iron–sulfur clusters and their electronic and magnetic properties
J.-M. Mouesca, B. Lamotte 1573

The aminophosphine-phosphinites and related ligands: synthesis, coordination chemistry and enantioselective catalysis
F. Agbossou, J.-F. Carpentier, F. Hapiot, I. Suisse, A. Mortreux 1615

Organometallic chemistry of group VI metals in the void space of zeolites
C. Brémard 1647

From supported homogeneous catalysts to heterogeneous molecular catalysts
A. Choplin, F. Quignard 1679

Surface organometallic chemistry: some fundamental features including the coordination effects of the support
J.-M. Basset, F. Lefebvre, C. Santini 1703

Synthesis of solid materials in molten nitrates
P. Afanasiev, C. Geantet 1725

Structure–activity relationships in catalysis by metals: some aspects of particle size, bimetallic and supports effects
B. Coq, F. Figueras 1753

Why is coordination chemistry stretching the limits of micro-electronics technology?
P. Doppelt 1785

Platinum, palladium and rhodium complexes as volatile precursors for depositing materials
J.-C. Hierso, R. Feurer, P. Kalck 1811

Author Index 1835

Subject Index 1836

The table of contents of *Coordination Chemistry Reviews* is included in ESTOC – Elsevier Science Tables of Contents service – which can be accessed on the World Wide Web at the following URLs:
http://www.elsevier.nl/locate/estoc or http://www.elsevier.com/locate/estoc